



3years in the landing obligation in Europe: Where do we stand, what have we learnt?

Ulrich, Clara

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3 years in the landing obligation in Europe: Where do we stand, what have we learnt?

H2020 DiscardLess (2015-2019)

Pr. Clara Ulrich, DTU Aqua, Denmark, coordinator
on behalf of the DiscardLess Consortium



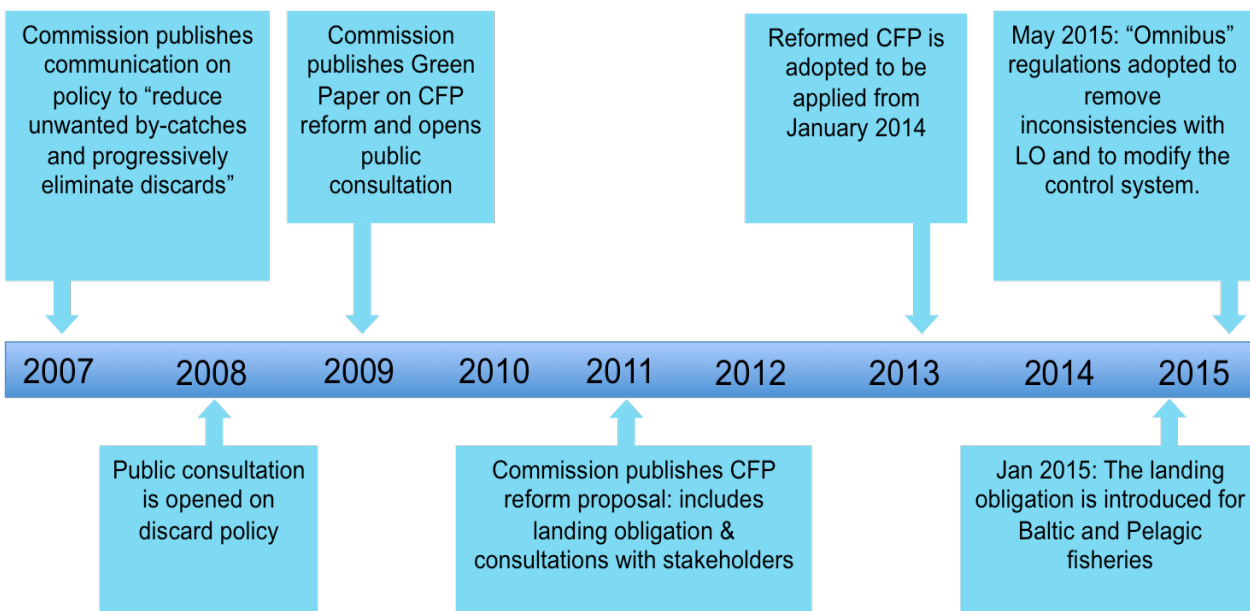
DTU Aqua
National Institute of Aquatic Resources

$$M2_i = \frac{\sum_j \frac{dR}{dt} N_j \frac{\varphi_{ji}}{\varphi_j}}{N_i \omega_i} \int_a^b \epsilon \Theta + \Omega \int \delta e^{i\pi} = \{2.7182818284\}$$

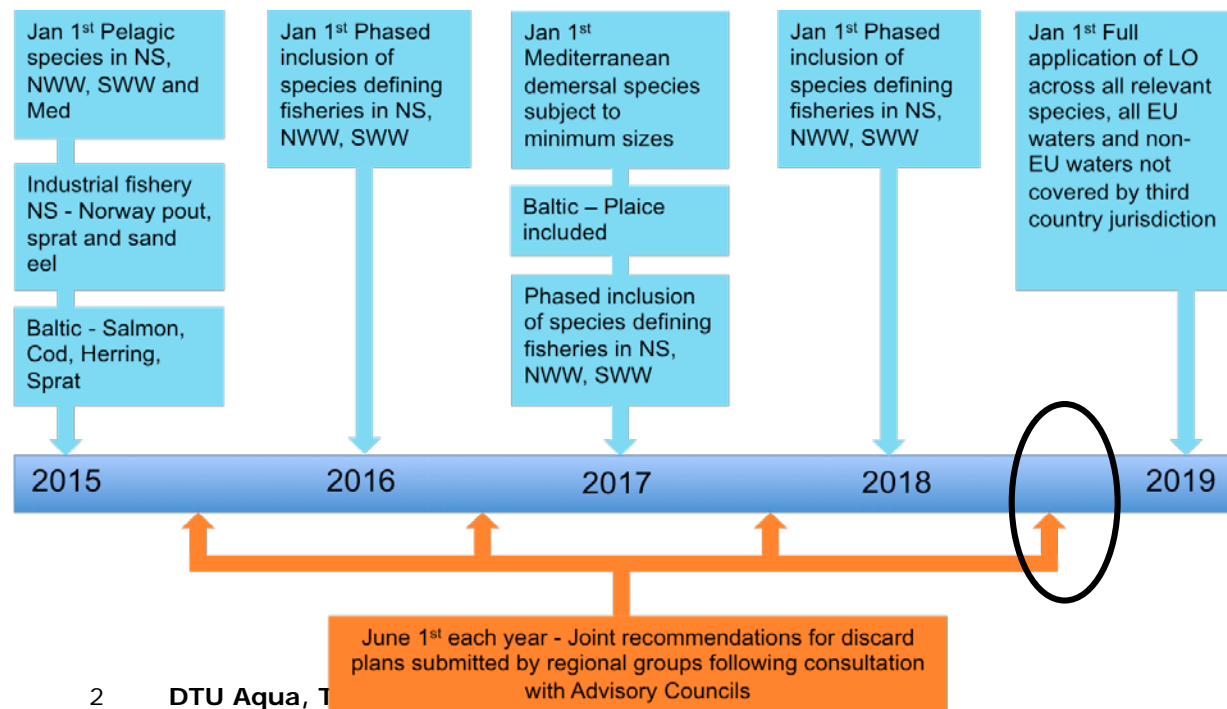
Other symbols visible: Δ , ∞ , χ^2 , Σ , $!$, \gg , \approx

The EU Landing Obligation

Preparation



Implementation

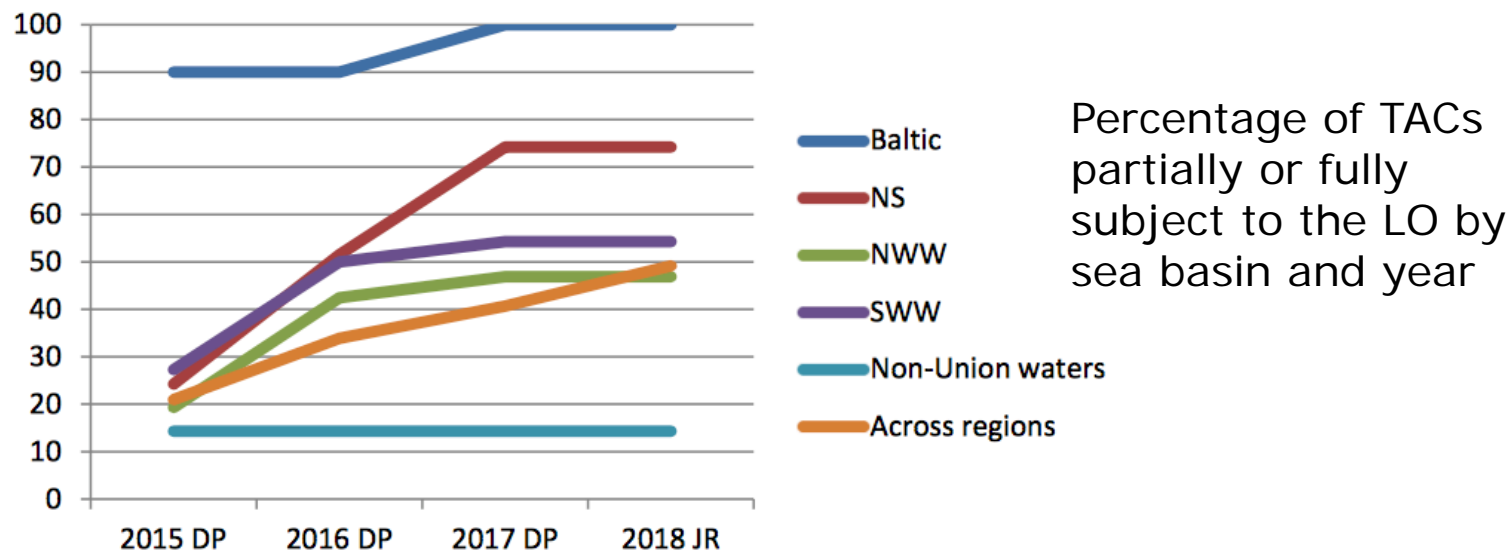


Fitzpatrick and Nielsen, 2016

Where do we stand in the middle of 2018?

Progresses on the regulatory side....

- 19 Regional Discard Plans adopted since 2014, laying down the calendar of implementation (species*fisheries) and the exemptions (high survivability, de minimis)



- A lot of progresses on scientific foundations for evaluation of plans and progresses (ICES, STECF) : exemptions, monitoring of undersize landings, member states reporting
- Changes in the control operations ("Last Haul" Eur. Fisheries Control Agency)

STECF PLEN 18-01, SWD/2018/329

Where do we stand in the middle of 2018?

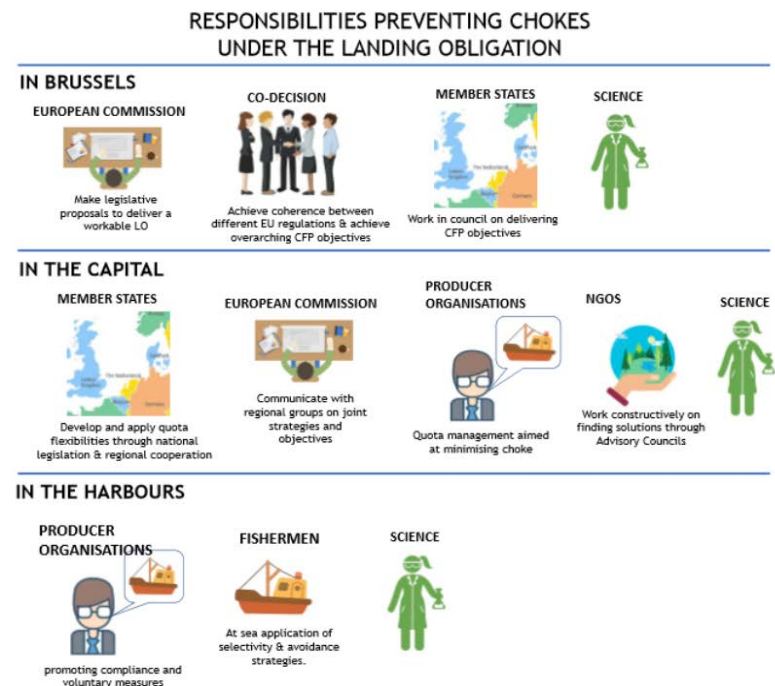
Progresses on reaching common understandings on discard causes and choke species

Choke categories:

- Category 1: Sufficient quota at Member State level, **issue at PO/individual level**
- Category 2: Insufficient quota at Member State level, **relative stability issue**
- Category 3: Insufficient quota at EU level, **overfished stock**
- Category 4: Economic choking.



Choke situation not observed yet! Only speculations on what may happen if the landing obligation is fully enforced



Where do we stand in the middle of 2018?

But very little visible progresses so far....

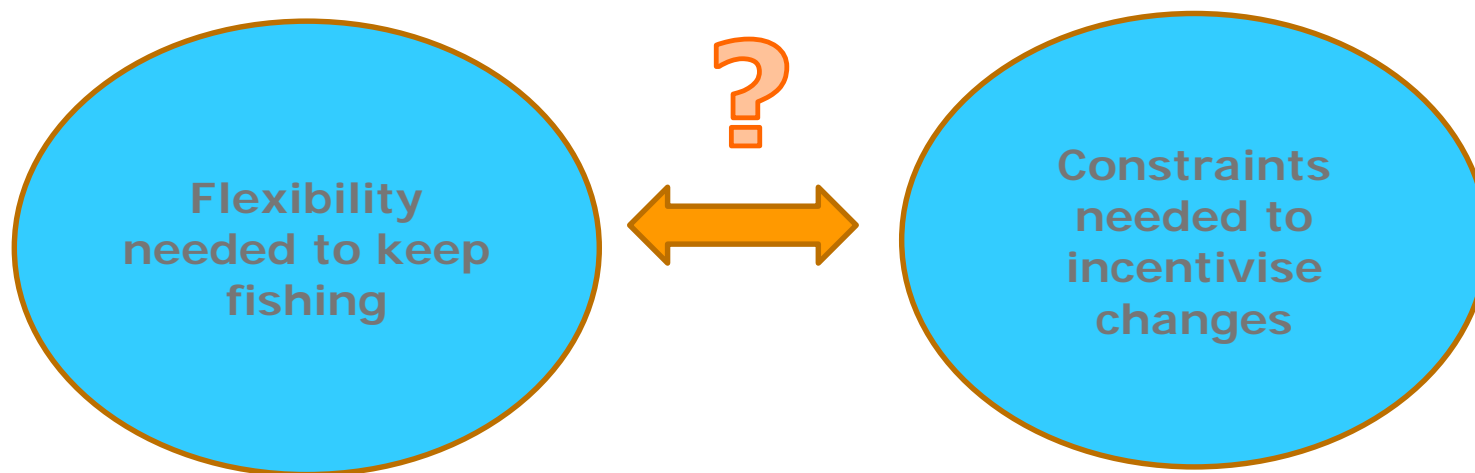
- Reported / Landed discards very low
- No obvious changes in selectivity/behaviour
- Very little use of EU operational funding (EMFF) allocated to landing obligation
- Still strong reluctance of the fishing industry

But also...

- TAC increases ("top-ups") but discarding continues...
- Removal of TACs (dab and flounder)...
- Changes to prohibited species (dogfish)...
- MultiAnnual plans with Fmsy upper...
- Reduction in the number of stocks with MSY advice...

STECF PLEN 18-01, SWD/2018/329

The landing obligation dilemma



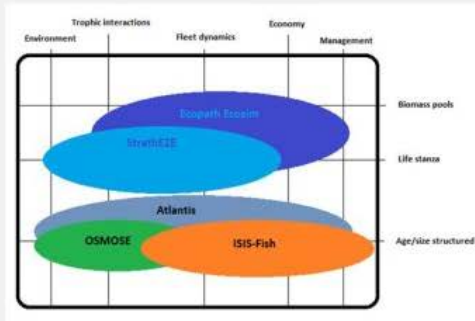
- Different approaches in different Member States

From STECF, 2018 and Fitzpatrick & Nielsen, 2018

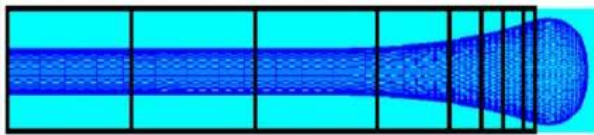
DiscardLess: What can Science do to help??

DiscardLess develops for example:

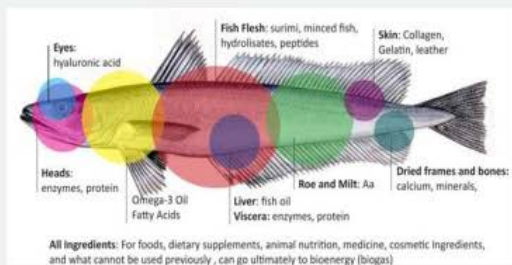
Models...



Technology...



Market analyses...



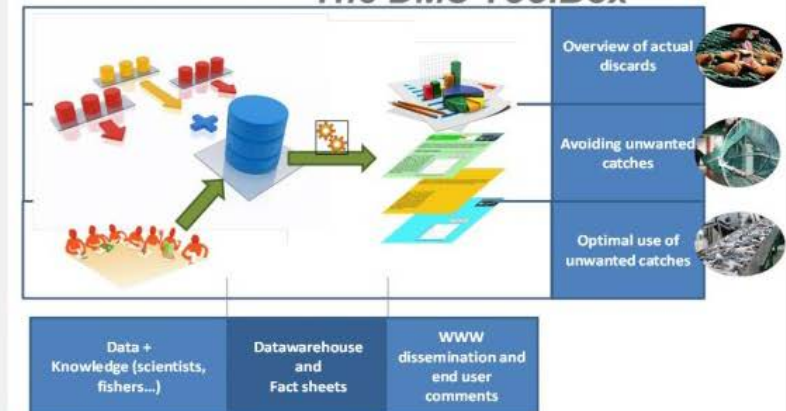
Exchanges with stakeholders and policymakers...



Economic data and scenarios...

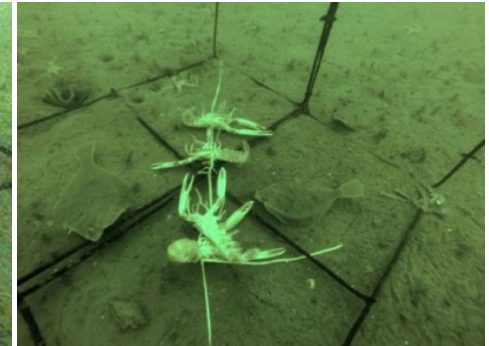
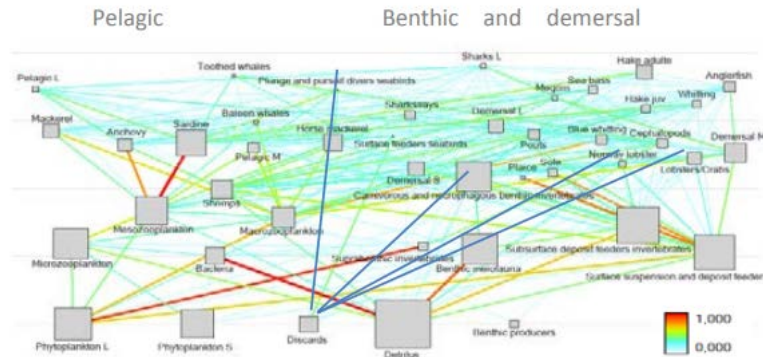


The DMS ToolBox

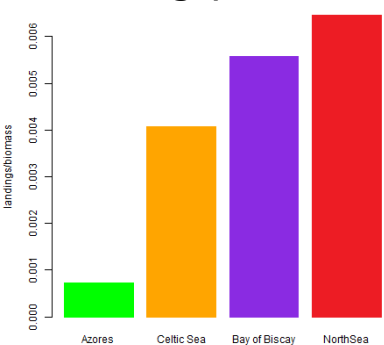


Question 1: Is a discard ban good for the ecosystem?

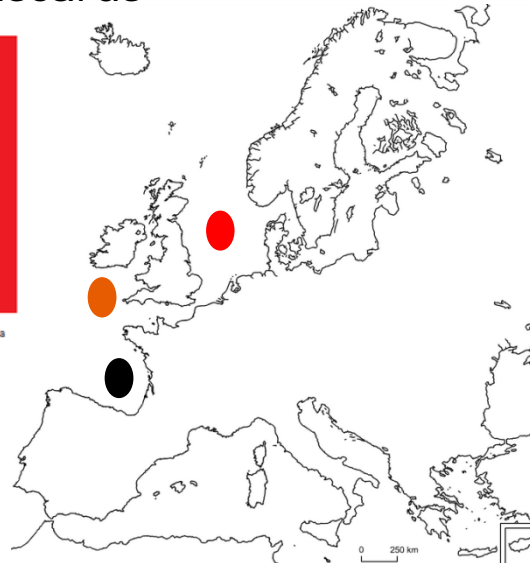
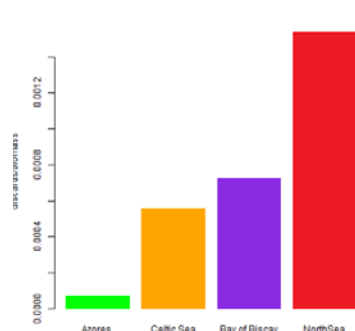
Lead: Marie Savina,
IFREMER, France



Fishing pressure



Amount of discards



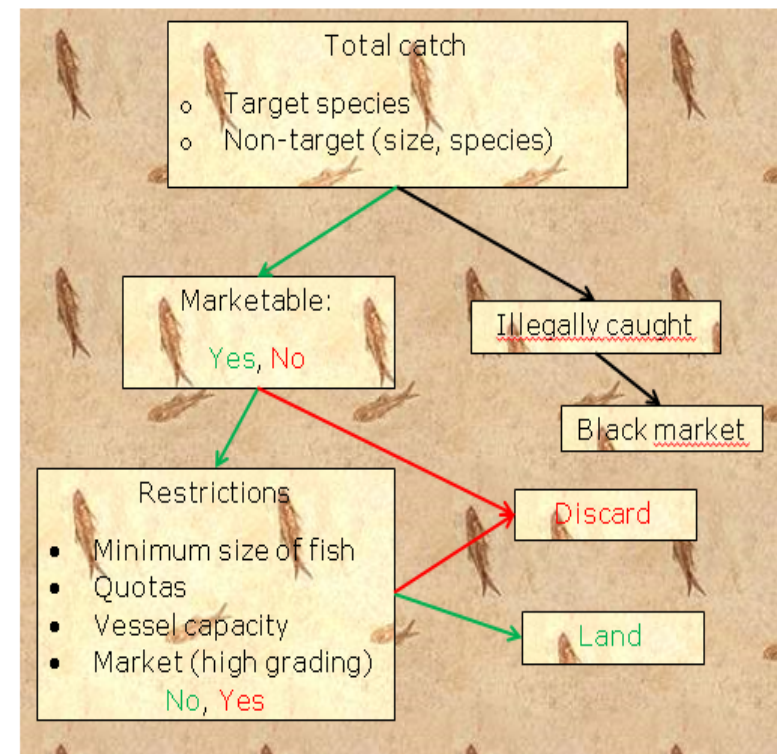
At **regional** scale:

- Seabirds most sensitive
- Foodweb effects beyond scavengers are limited
- Reduction in mortality is the largest ecological effect (achieving Fmsy!)
- Local effects are less well known

Question 2: Can a discard ban be good for fishers?

*Lead: Peder Andersen &
Ayoe Hoff, IFRO, Denmark /
Katia Frangoudes, UBO,
France*

- Bioeconomic models
- stakeholders interviews: fishers, administrators, EnvNGO's, auction houses, processing industries.
- Short-term economic impacts
- Negative view of the LO
- Incentives discussed

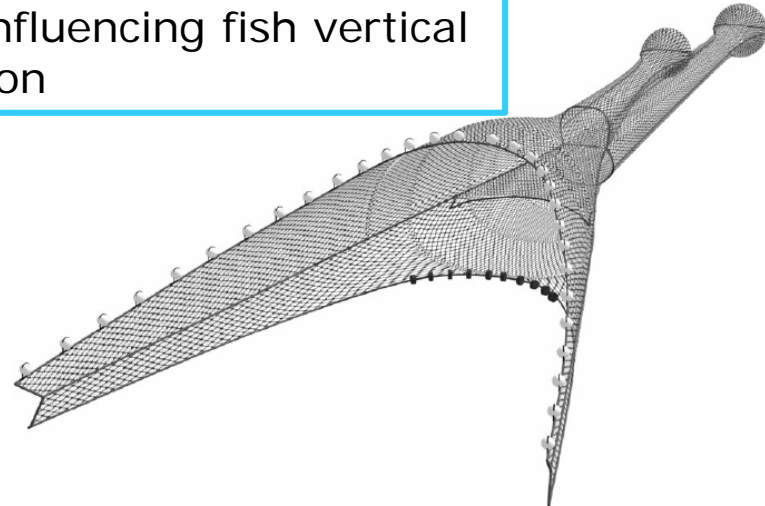


Question 3: Rethinking gear selectivity

Lead: Barry O' Neill, DTU, DK

Selectivity catalogue, >60 factsheets,

Factors influencing fish vertical distribution



using a flexible grid

to reduce capture of haddock, whiting and haddock in a nephrops trawl

TARGET SPECIES

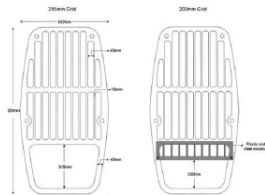
Nephrops and mixed round and flatfish

AREA, VESSEL

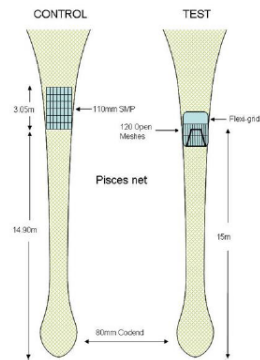
25 catch comparison hauls took place in the North Sea on board the FV Amity II PD 177 (21m, 400kW) during November 2012.

GEAR MODIFICATION

A flexible grid with 45mm bar spacing and with bottom gaps of (i) 315mm and (ii) 200mm was fitted into the extension of a nephrops trawl



Average % reduction		
grid	315 mm	200 mm
Cod	66	95
Haddock	55	78
Whiting	73	81
Monkfish	76	84
Saithe	87	98
plaice	78	74
Lemon sole	23	24
Nephrops	-3	-1



RESULTS

- there were no losses of haddock or whiting
- fewer smaller cod (< 78 cm) were caught, but above 78 cm, there was no difference
- monkfish catches were 16% less, but these were all small (< 55cm)
- megrim catches were reduced by 43%

FURTHER INFORMATION
Jim Drewery (j.drewery@marlab.ac.uk)

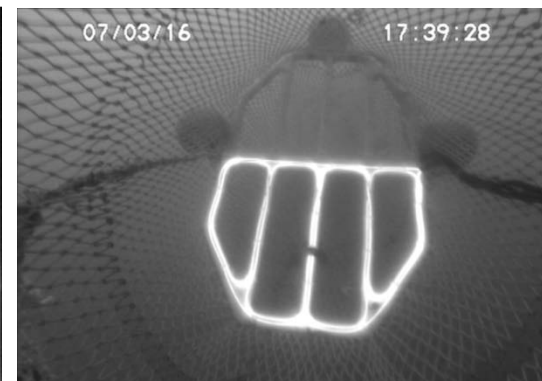
marinescotland
science



 DiscardLess



Ongoing analyses of the effects of light

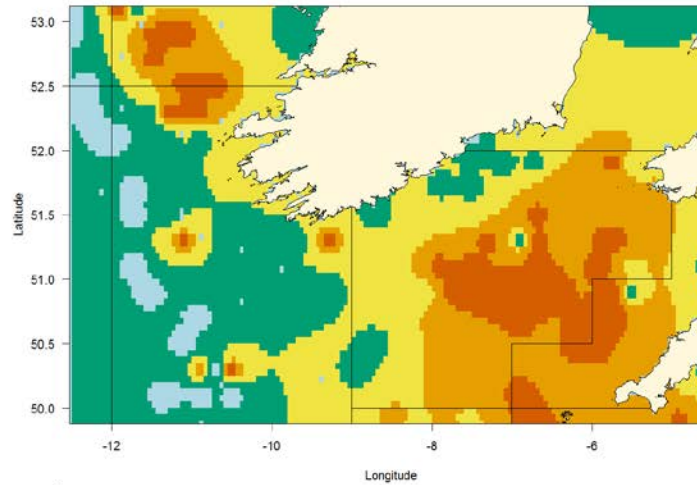
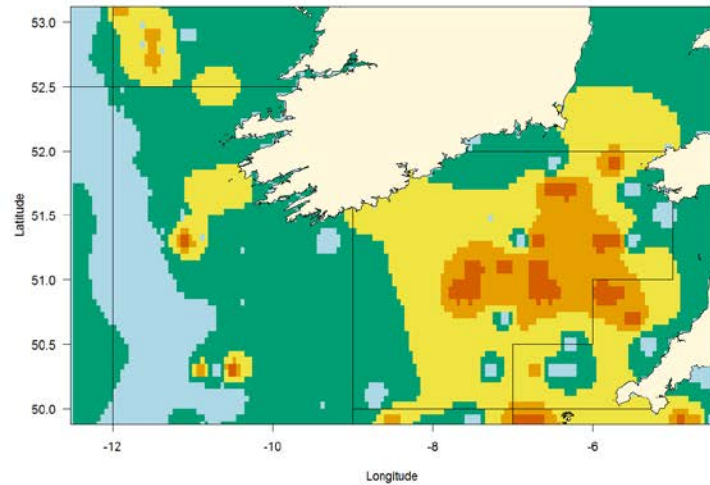


Question 4: Reducing unwanted catches by changing when and where to fish

Lead: Dave Reid, MI, Ireland

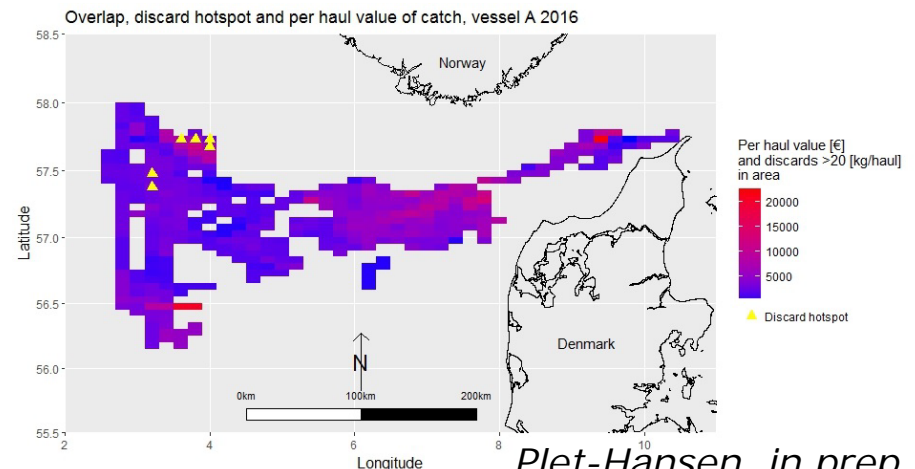
<MCRS

>MCRS



Legend
MIN    MAX

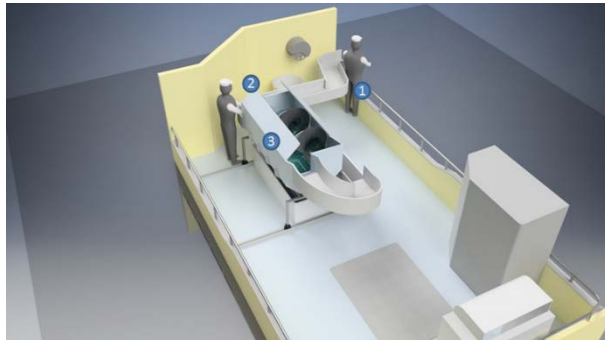
- Tentative prediction of "hot-spots"
- Real-time closures
- Is this useful to fishers?



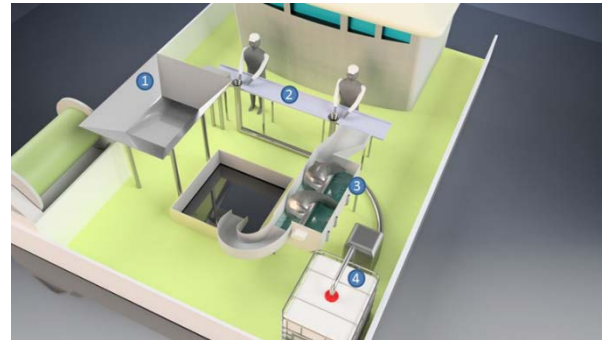
Plet-Hansen, in prep.

Question 5. Onboard handling of unwanted catches

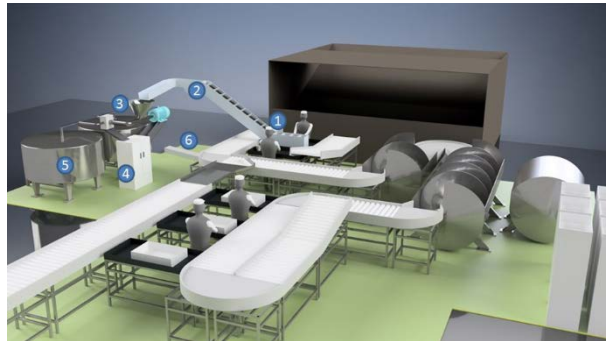
Lead: Jonas R. Viðarsson, MATIS, Iceland



Coastal Vessel 11m



Bottom trawler 23 m



Bottom trawler 39 m

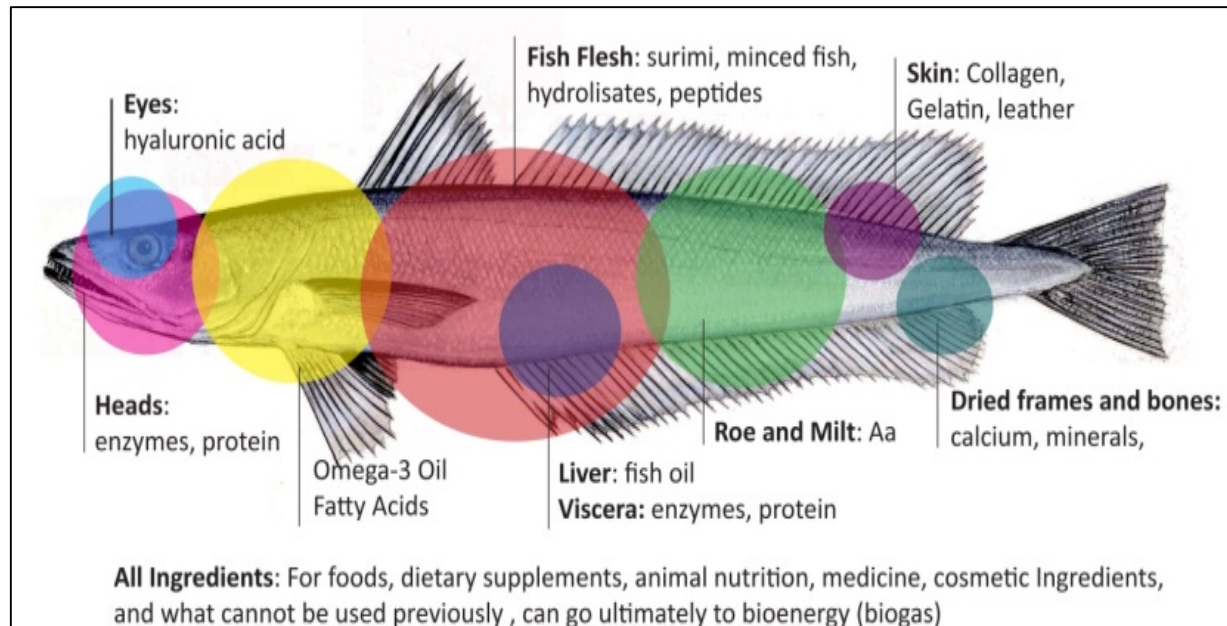


Large trawler 50 m

- Many options already exist... mainly for larger trawlers
- Investment
Payback time estimated 1-2 years

Question 6. Valorisation of unwanted catches

Lead: Begoña Perez Villareal, AZTI, Spain



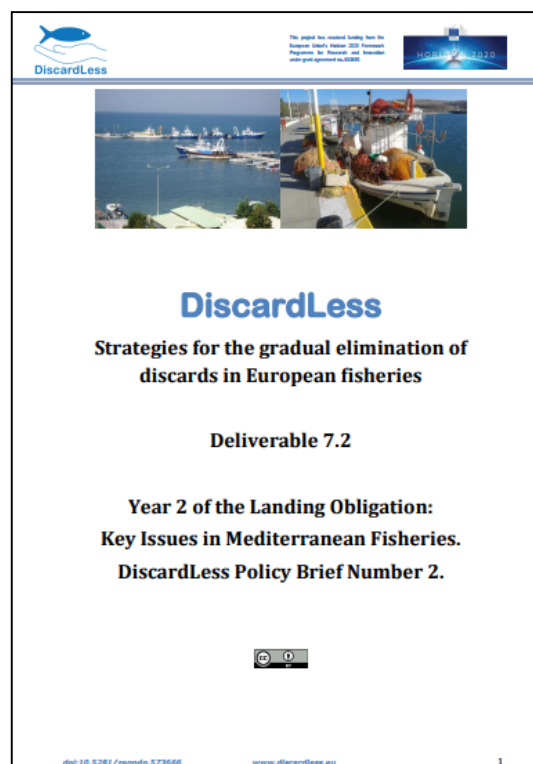
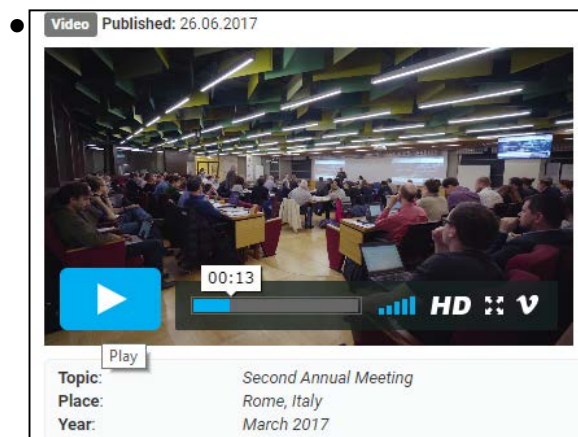
- More than 30 options identified for fish < MCRS
- Food, bio-products, feed, industrial uses, energy, agronomic uses
- Use of heads and viscera



Question 7: Telling our stories

- Policy briefs
- Stakeholders interviews
- Scientific papers, opinion articles, videos, flyers, posters, newsletters

*Lead: Kåre Nolde Nielsen, UiT, Norway;
Clara Ulrich, Denmark*



What can Science do to help?

- Bringing information / discussing solutions
- Scientific support to discard reduction by
 - Analysing issues at EU, regional, national, fishery and individual levels
 - Making knowledge on existing options easily available and shared
 - Exploring new ideas, including technical feasibility, cost-benefits, ecological and economic sustainability, and controllability
- A lot of direct contacts and meetings across all areas and all types of stakeholders, analysis of incentives and reluctances
- Landing Obligation: There is no way back... but we are not there yet!



The Book



www.discardless.eu

40 kg box of discards

Lisa Borges, 2002